

FIGURE 1

TCTAGACTGG ACAGCATCCA CAAGAGAAGC ACCTAGAAGG AGAATTTTCC CCAGCAGCTT
GCTCAGGACC CTGCAGGAGC CGCAGCTGGG ACTGGACCTG CTGTTAACCA TGAACCTCTT
CTGCTGCCTG TCTTCTGTTT CTCCGATGCT GCCTAACCTC TCTGAGCACC CTGCAGCCCC
TCCTGCCAGC AACCGGAGCG GCAGTGGGTT CTGTGAGCAG GTCTTCATCA AGCCGGAGGT
CTTCCTGGCT CTGGGCATCG TCAGTCTGAT GGAAAACATC CTGGTGATCC TGGCTGTGGT
CAGGAATGGC AACCTGCACT CTCCCATGTA CTTCTTCCTG TGCAGCCTGG CTGCAGCCGA
CATGCTGGTG AGCCTGTCCA ACTCCCTGGA GACCATCATG ATCGCCGTGA TCAACAGCGA
CTCCCTGACC TTGGAGGACC AGTTTATCCA GCACATGGAT AATATCTTCG ACTCTATGAT
TTGCATCTCC CTGGTGGCCT CCATCTGCAA CCTCCTGGCC ATTGCCATCG ACAGGTACGT
CACCATCTTC TATGCCCTTC GGTACCACAG CATCATGACA GTTAGGAAAG CCCTCACCTT
GATCGGGGTC ATCTGGGTCT GCTGCGGCAT CTGCGGCGTG ATGTTTCATCA TCTACTCCGA
GAGCAAGATG GTCATCGTGT GTCTCATCAC CATGTTCTTC GCCATGGTGC TCCTCATGGG
CACCTATAT ATCCACATGT TCCTCTTCGC CAGGCTCCAC GTCCAGCGCA TCGCAGTGCT
GCCCCCTGCT GGCCTGGTGG CCCCACAGCA GCACTCCTGC ATGAAGGGGG CTGTCACCAT
CACTATCCTG CTGGGTGTTT TCATCTTCTG CTGGGCGCCT TTCTTCCTCC ACCTGGTCTT
CATCATCACC TGCCCCACCA ATCCCTACTG CATCTGCTAC ACGGCCCAT TCAACACCTA
CCTGGTTCTC ATCATGTGCA ACTCCGTCAT CGACCCCTC ATCTACGCCT TCCGCAGCCT
GGAGCTGCGC AACACGTTCA AGGAGATTCT CTGCGGCTGC AACAGCATGA ACTTGGGCTA
GGATGCCCCGTT GAGAGGTGTT CACATCCAGC CAAGAGACAA AAACAACGCT CAGACGGGAC
GTAAAAGGGT GTTAGGAGCT GGAAGTGTGC TTGGCTTCGT CTGTAAGCTC GTGGCCCTTT
GCAGACGGGA CACGGCGTAG GATGGGCTGT CTGTGAGGAT CTGTGTGTGG GTAAGTCAGT
TTGATCTAGC ACATAGCCTG GAAGAATCAG GCAAAGCAGC CCTGAGTGTC ATCTGTGTTC
ATTGCTAGGC ACCCAGGGTT TGTGGCCCCCT GCCTGCTTAT TGGCTTTGTA CCAGTAACTG
TGCTTCAAGC CAACCAGACC GGAGGGCTCT CGTGAGCAGA AAGAGTGCTT AGACTTCCGG
CAAGCATCCT GGCTCACAGC GGCCACCTCC TGACCACTAC CGGGAGAGCT TTGCACATAT
TCTGTGGGAG ATTGAGTGAA GCCCTGAAAA CAATGTGATA TTTGCTGCTC CCTTCCAGAA
CTTACATCTG TGCCAGCCTC CCCGAACCCC TGCACAGAGA CATGACCCCC TTCTCCCTGT
GCCGTTGTCA TGGTTGTTAT TATTGTTGGA GTTTTGTTCG TTAATCTA AGCTT (SEQ ID NO:1).

FIGURE 2

MNSSCCLSSV SPMLPNLSEH PAAPPASNRS GSGFCEQVFI KPEVFLALGI VSLMENILVI
LAVVRNGNLH SPMYFFLC SL AAADMLVSL NSLETIMIAV INSDSLTLED QFIQHMDNIF
DSMICISLVA SICNLLAIAI DRYVTIFYAL RYHSIMTVRK ALTIGVIWV CCGICGVMFI
IYSESKMVIV CLITMFFAMV LLMGTLYIHM FLFARLHVQR IAVLPPAGVV APQQHSCMKG
AVTITILLGV FIFCWAPFFL HVLIIITCPT NPYCICYTAH FNTYLVLMC NSVIDPLIYA
FRSLELRNTF KEILCGCNSM NLG (SEQ ID NO:2.)

FIGURE 3

ATGAGCATCC AAAAGAAGTA TCTGGAGGGA GATTTTGTCT TTCCTGTGAG CAGCAGCAGC
TTCCTACGGA CCCTGCTGGA GCCCCAGCTC GGATCAGCCC TTCTGACAGC AATGAATGCT
TCGTGCTGCC TGCCCTCTGT TCAGCCAACA CTGCCTAATG GCTCGGAGCA CCTCCAAGCC
CCTTTCTTCA GCAACCAGAG CAGCAGCGCC TTCTGTGAGC AGGTCTTCAT CAAGCCCGAG
ATTTTCCTGT CTCTGGGCAT CGTCAGTCTG CTGGAAAACA TCCTGGTTAT CCTGGCCGTG
GTCAGGAACG GCAACCTGCA CTCCCCGATG TACTTCTTTC TCTGCAGCCT GGCGGTGGCC
GACATGCTGG TAAGTGTGTC CAATGCCCTG GAGACCATCA TGATCGCCAT CGTCCACAGC
GACTACCTGA CCTTCGAGGA CCAGTTTATC CAGCACATGG ACAACATCTT CGACTCCATG
ATCTGCATCT CCCTGGTGGC CTCCATCTGC AACCTCCTGG CCATCGCCGT CGACAGGTAC
GTCACCATCT TTTACGCGCT CCGCTACCAC AGCATCATGA CCGTGAGGAA GGCCCTCACC
TTGATCGTGG CCATCTGGGT CTGCTGCGGC GTCTGTGGCG TGGTGTTTAT CGTCTACTCG
GAGAGCAAAA TGGTCATTGT GTGCCTCATC ACCATGTTCT TCGCCATGAT GTCCTCATG
GGCACCCTCT ACGTGACAT GTTCTCTTTT GCGCGGCTGC ACGTCAAGCG CATAGCAGCA
CTGCCACCTG CCGACGGGGT GGCCCCACAG CAACACTCAT GCATGAAGGG GGCAGTCACC
ATCACCATTG TCCTGGGCGT GTTCATCTTC TGCTGGGCCC CCTTCTTCCT CCACCTGGTC
CTCATCATCA CCTGCCCCAC CAACCCCTAC TGCATCTGCT ACACTGCCCCA CTTCAACACC
TACCTGGTCC TCATCATGTG CAACTCCGTC ATCGACCCAC TCATCTACGC TTTCCGGAGC
CTGGAATTGC GCAACACCTT TAGGGAGATT CTCTGTGGCT GCAACGGCAT GAACTTGGGA (SEQ ID

NO:3)

FIGURE 4

MSIQKKYLEG DFVFPVSSSS FLRTLLEPQL GSALLTAMNA SCCLPSVQPT LPNGSEHLQA
PFFSNQSSSA FCEQVFIKPE IFLSLGIVSL LENILVILAV VRNGNLHSPM YPFLCSLAVA
DMLVSVSNAL ETIMIAIVHS DYLTFFEDQFI QHMDNIFDSM ICISLVASIC NLLAIAVDYR
VTIFYALRYH SIMTVRKALT LIVAIWCCG VCGVVFIVYS ESKMVIVCLI TMFFAMMLLM
GTLYVHMFLF ARLHVKRIAA LPPADGVAPQ QHSCMKGAVT ITILLGVFIF CWAPFFLHLV
LIITCPTNPY CICYTAHFNT YLVLIMCNSV IDPLIYAFRS LELRNTFREI LCGCNGMNLG (SEQ ID
NO:4).

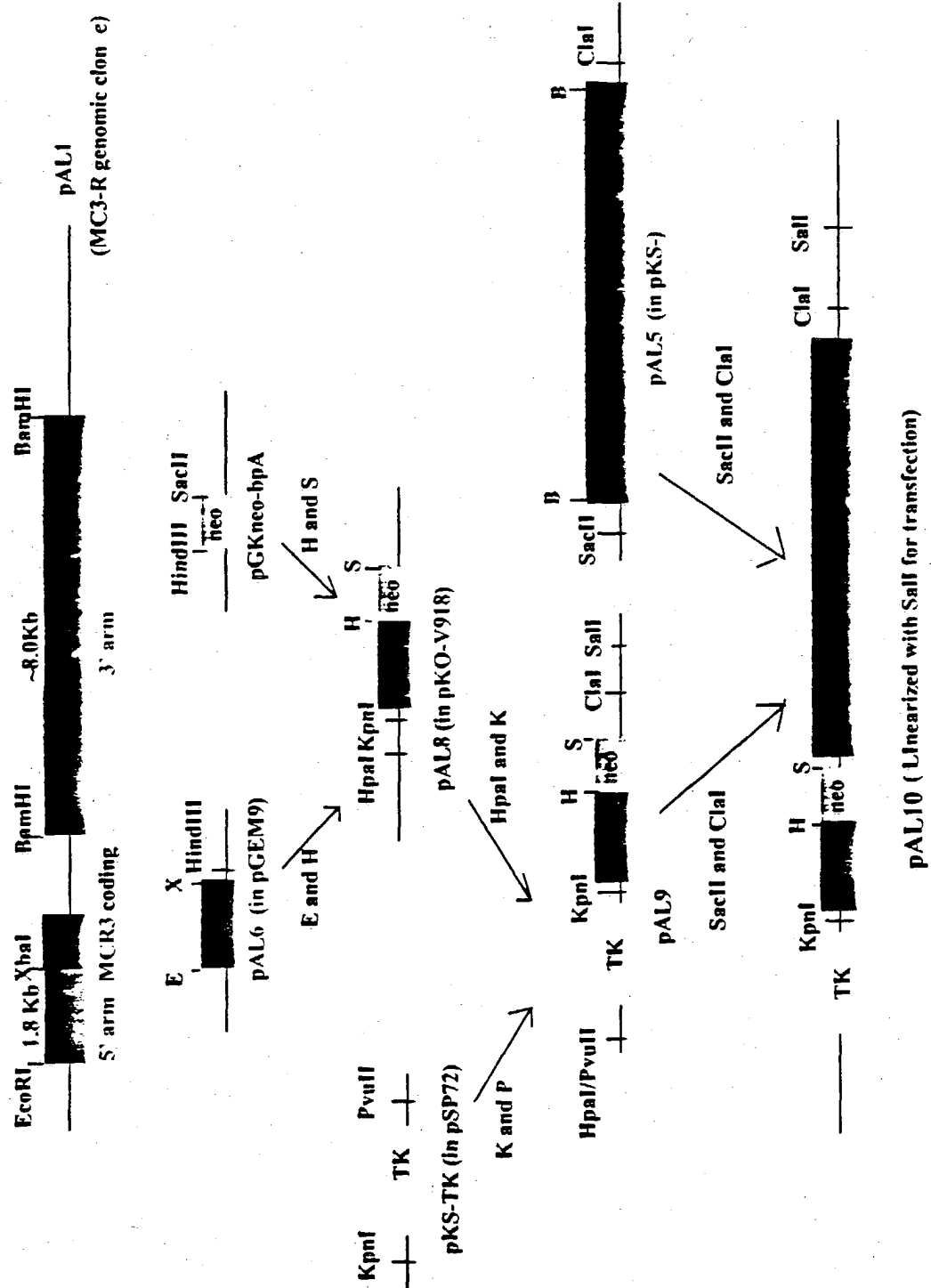


FIGURE 5

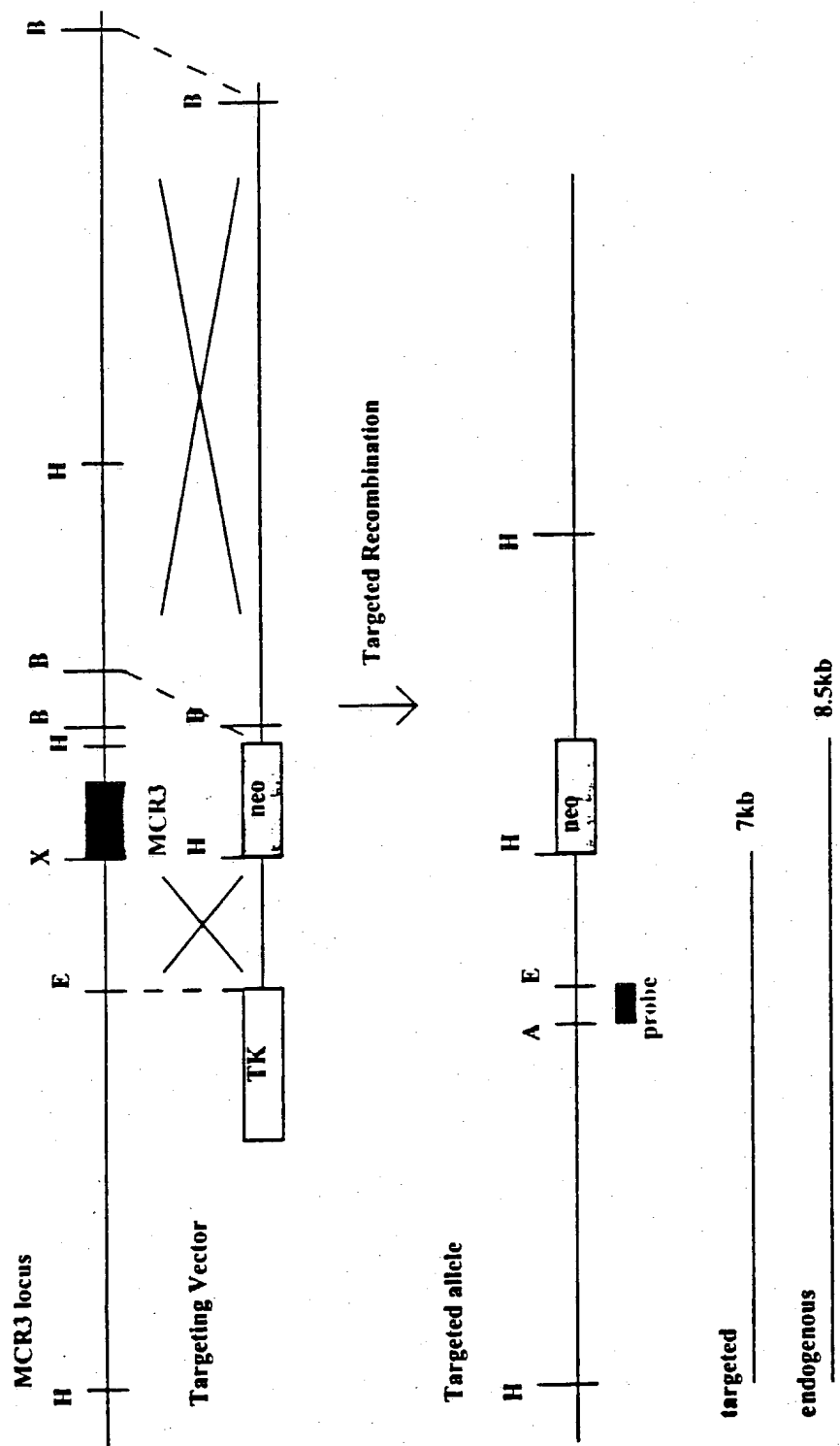


FIGURE 6

Southern blot analysis

FIGURE 7A

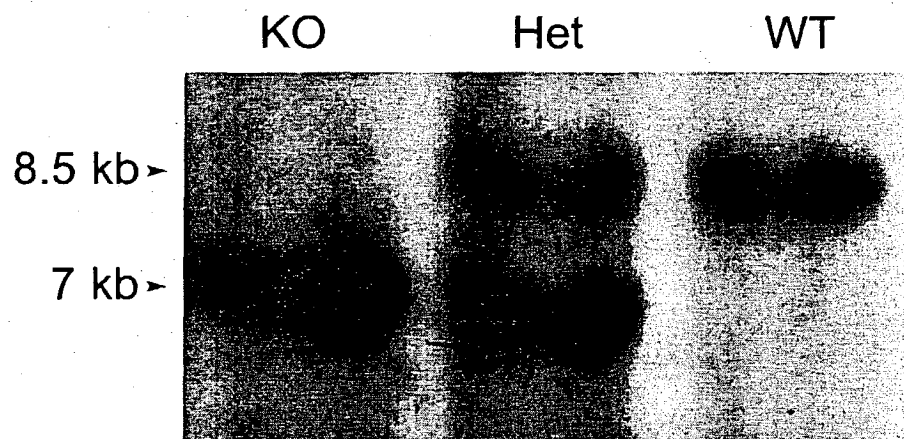
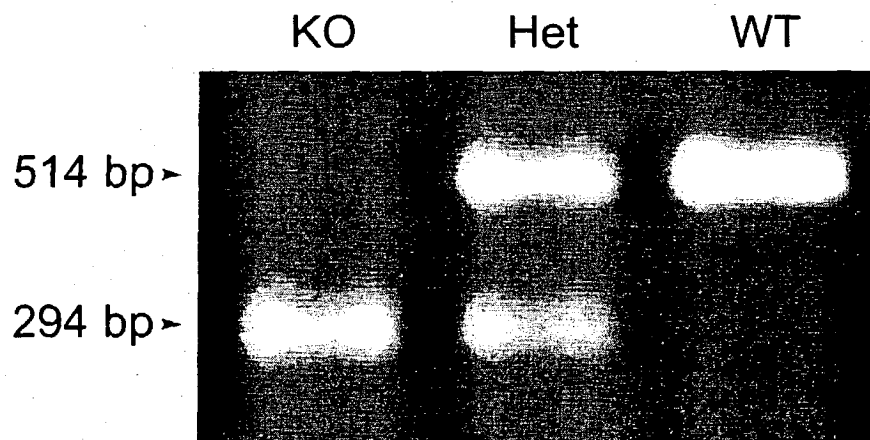


FIGURE 7B

PCR analysis



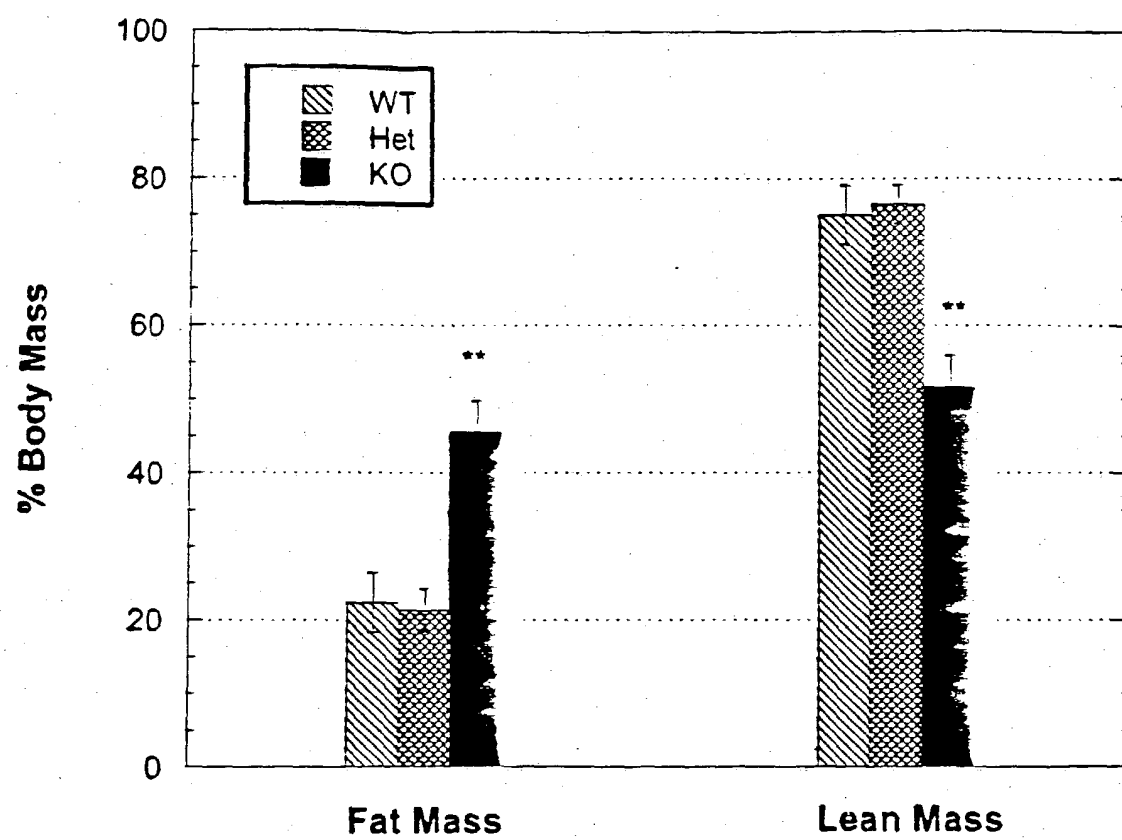


FIGURE 8

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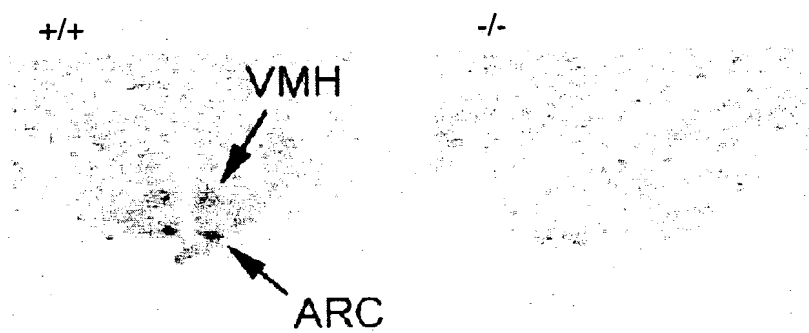
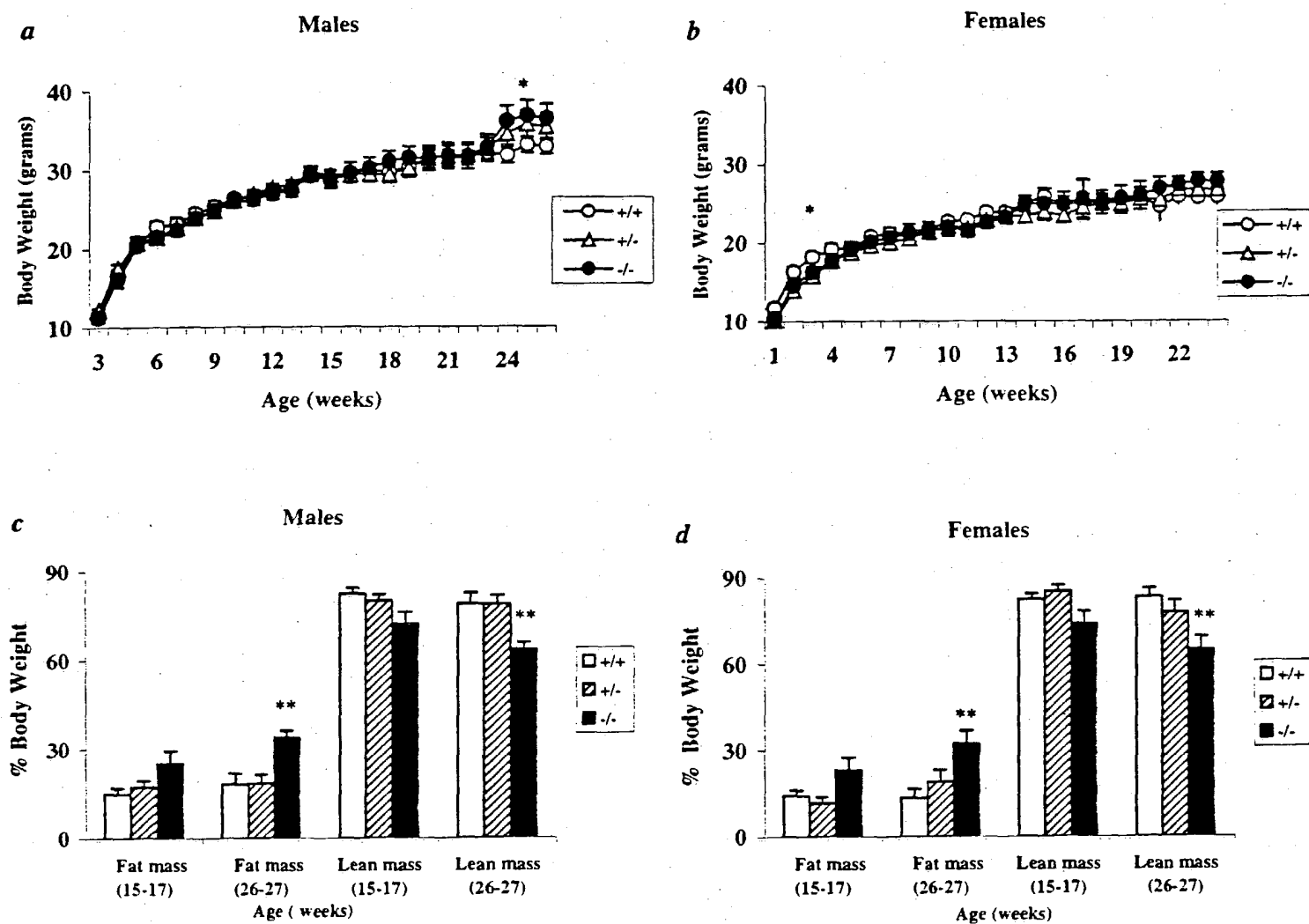
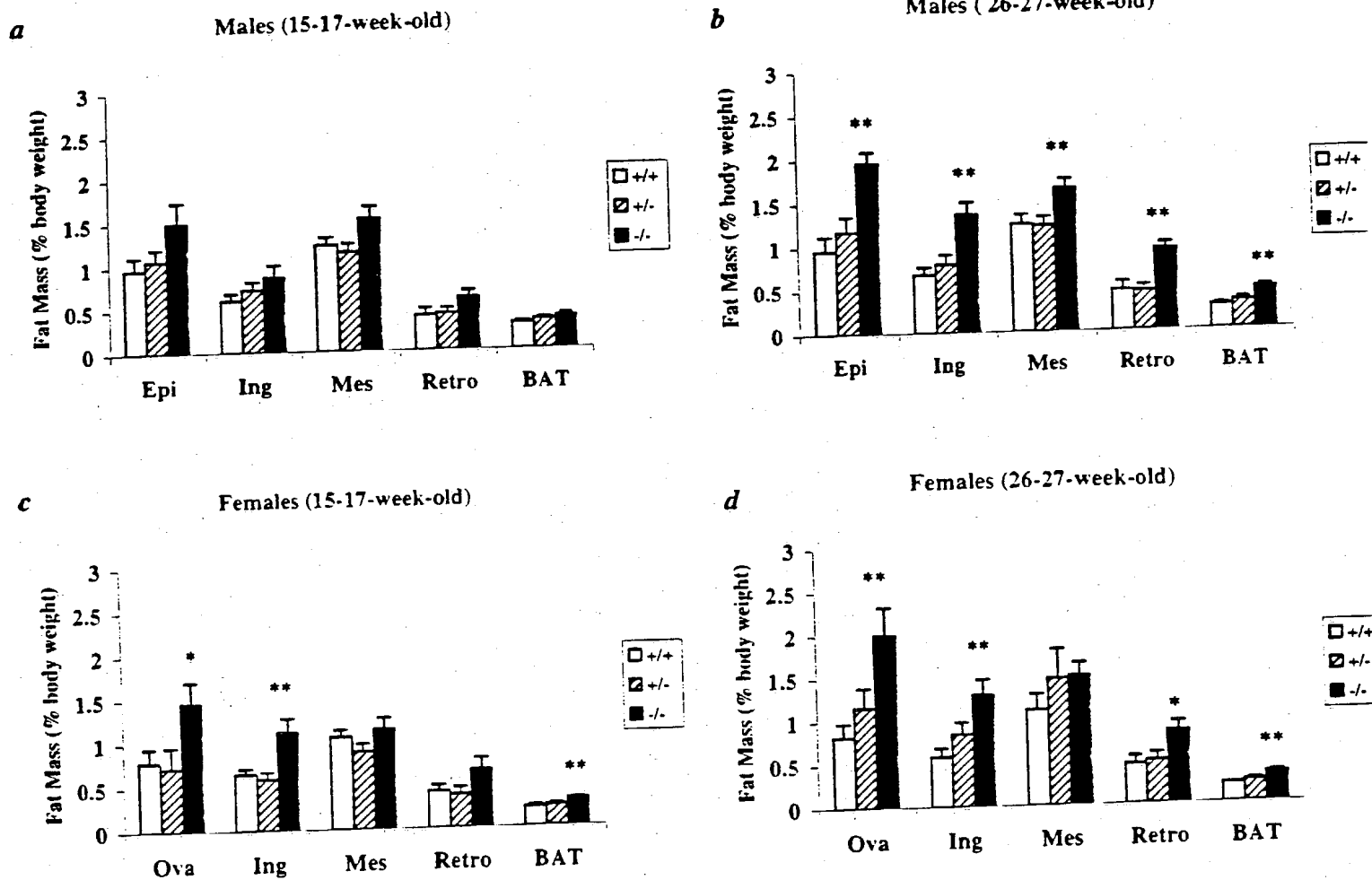


FIGURE 9

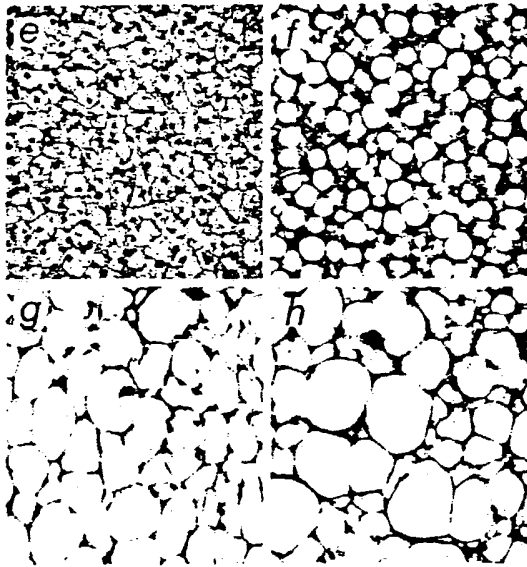


FIGURES 10A-D

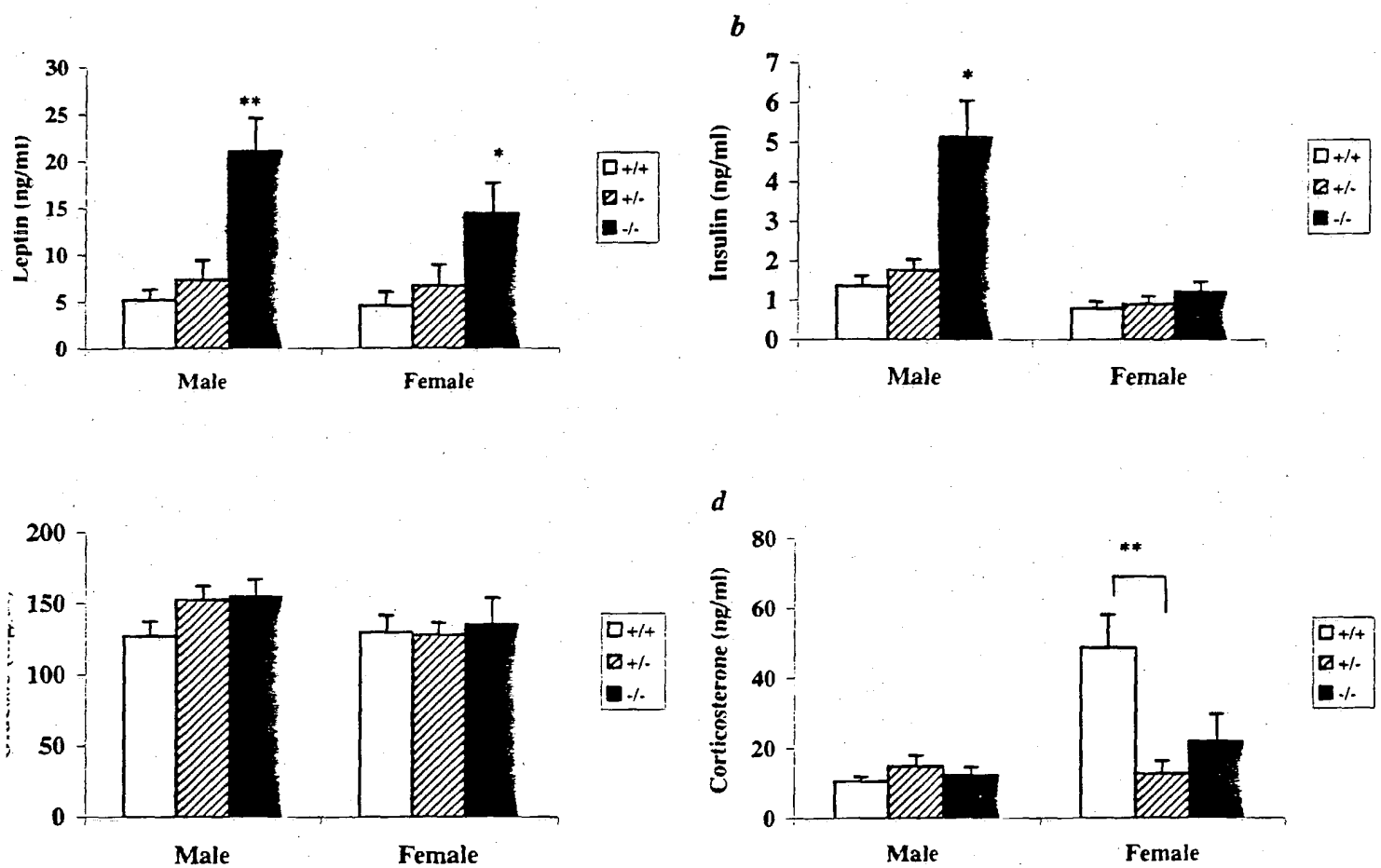


FIGURES 11A-D

20561Y

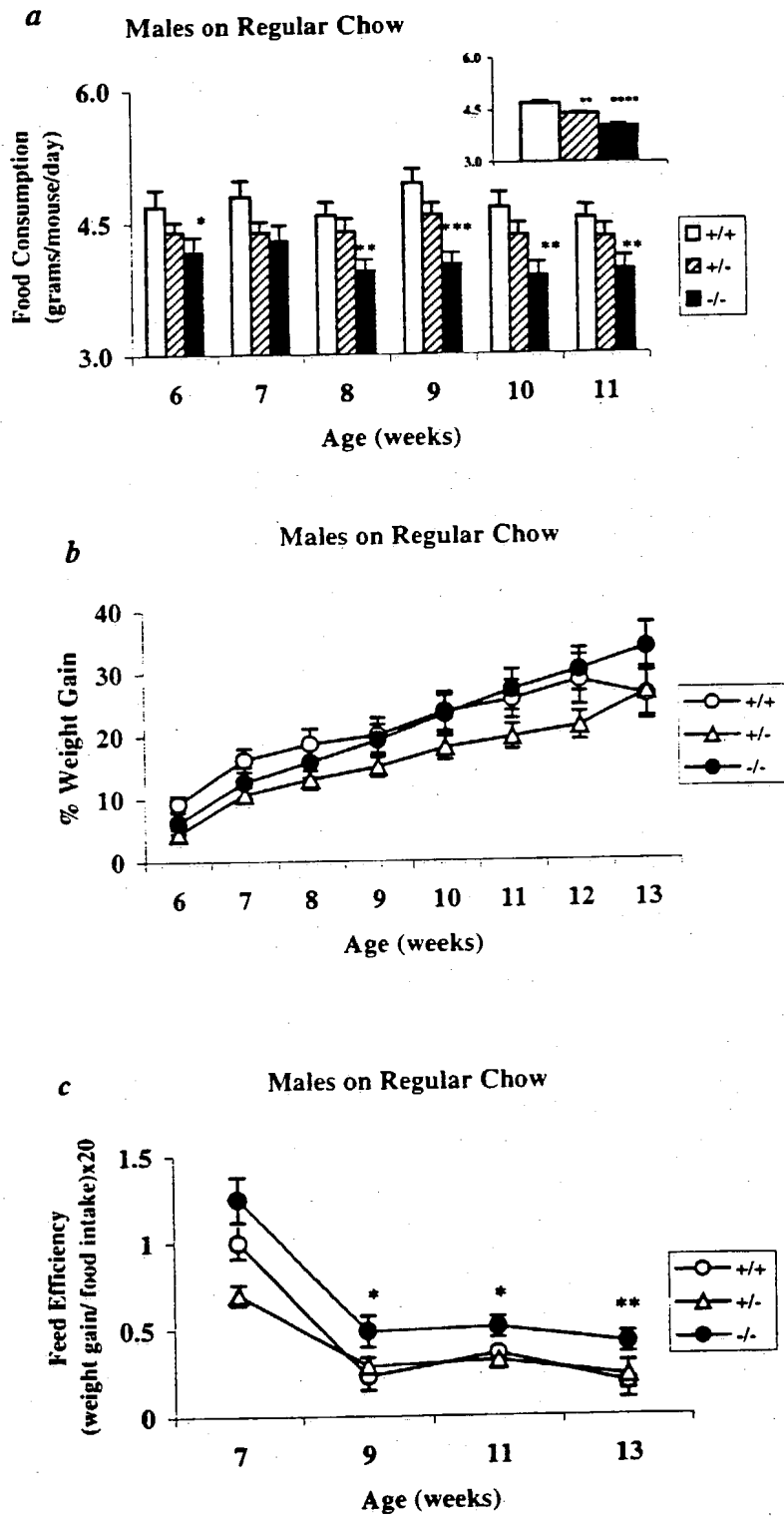


FIGURES 11E-H

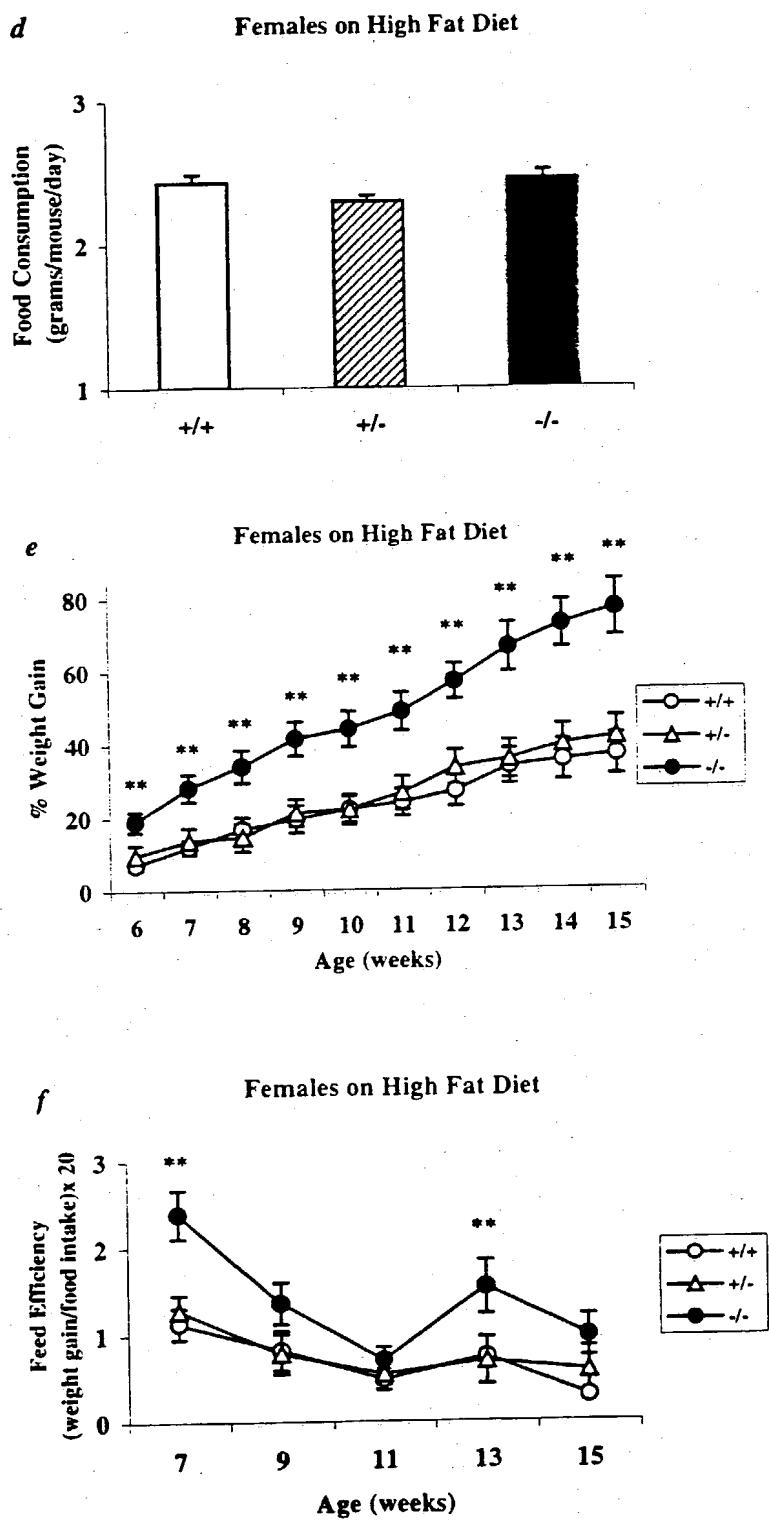


FIGURES 12A-D

20561Y



FIGURES 13A-C



FIGURES 13D-F

20561Y

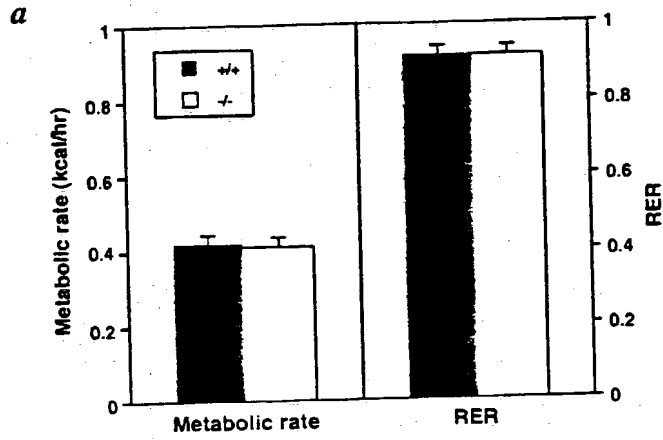
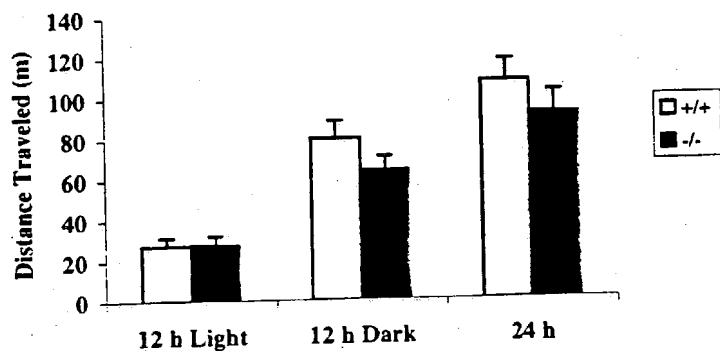
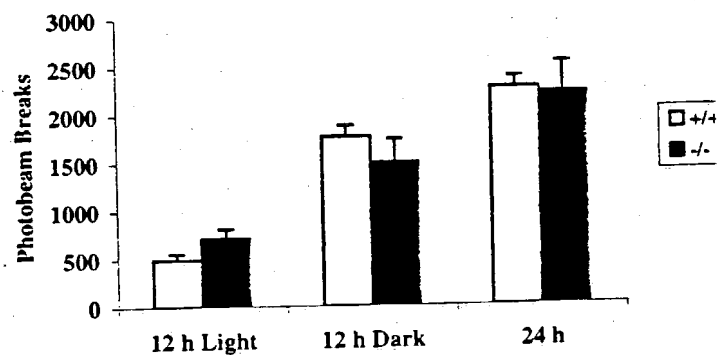
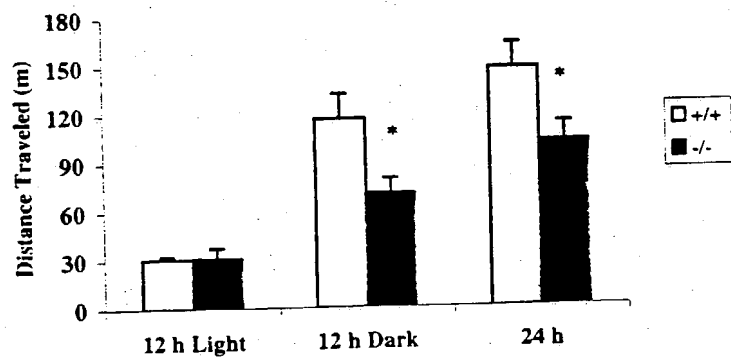
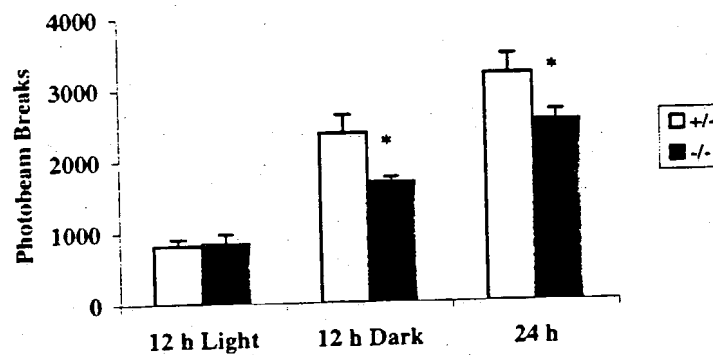


FIGURE 14A

b Locomotor Activity of Males**c** Fine Movements of Males**d** Locomotor Activity of Females**e** Fine Movements of Females

FIGURES 14B-E

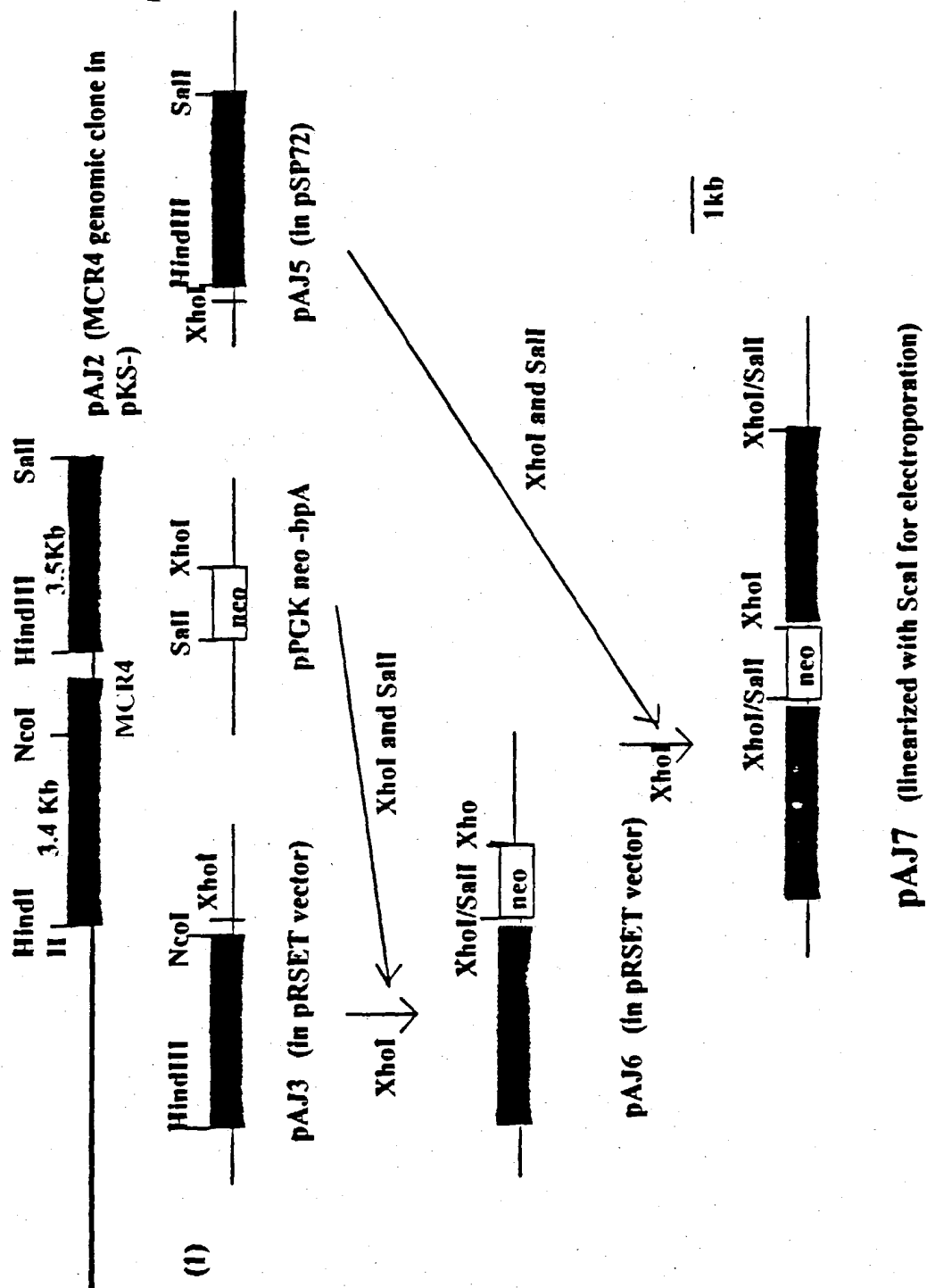


FIGURE 15

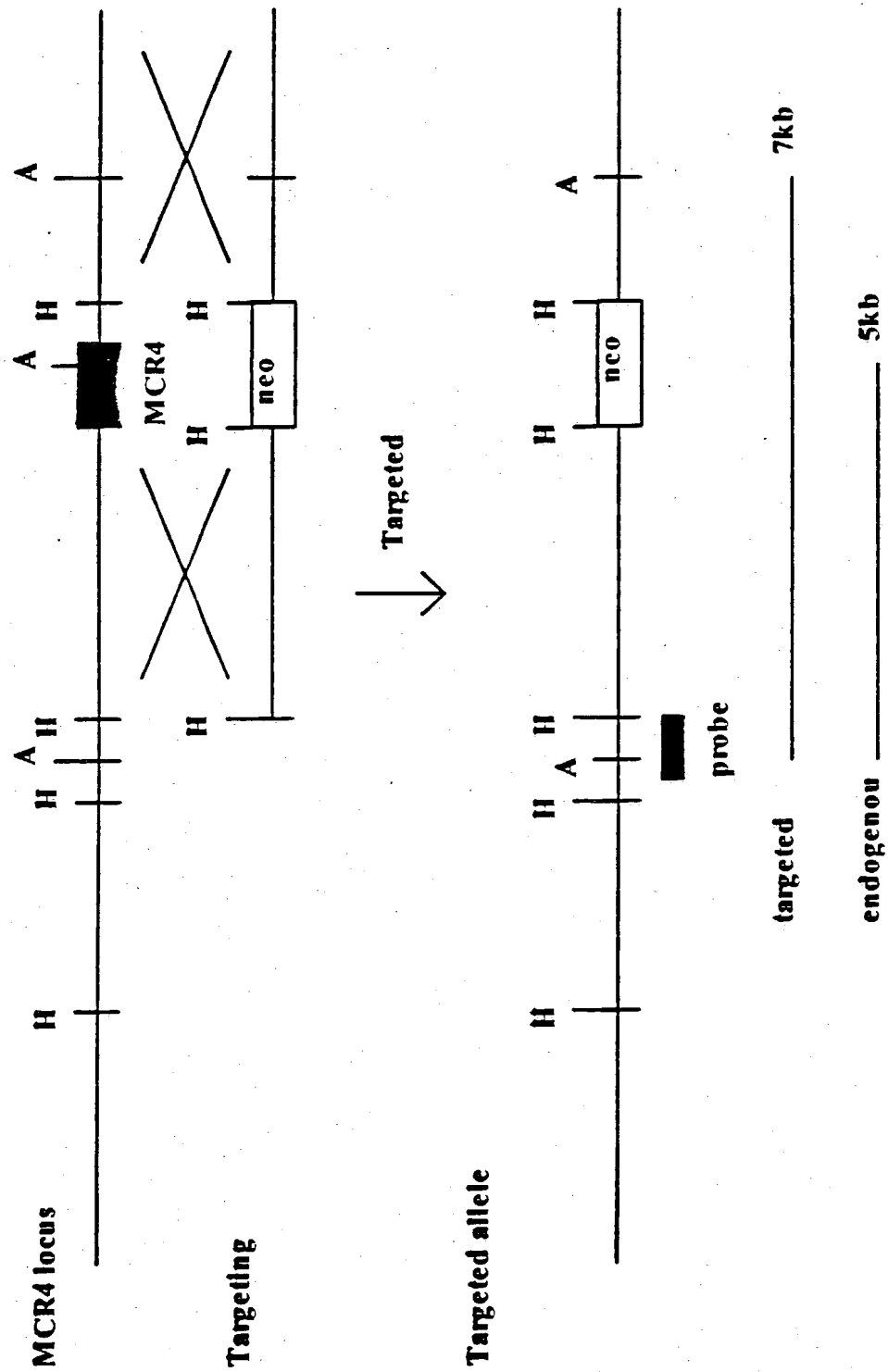


FIGURE 16

20561Y

MC3-R and MC4-R effects on body weight in female mice (age 26 weeks)

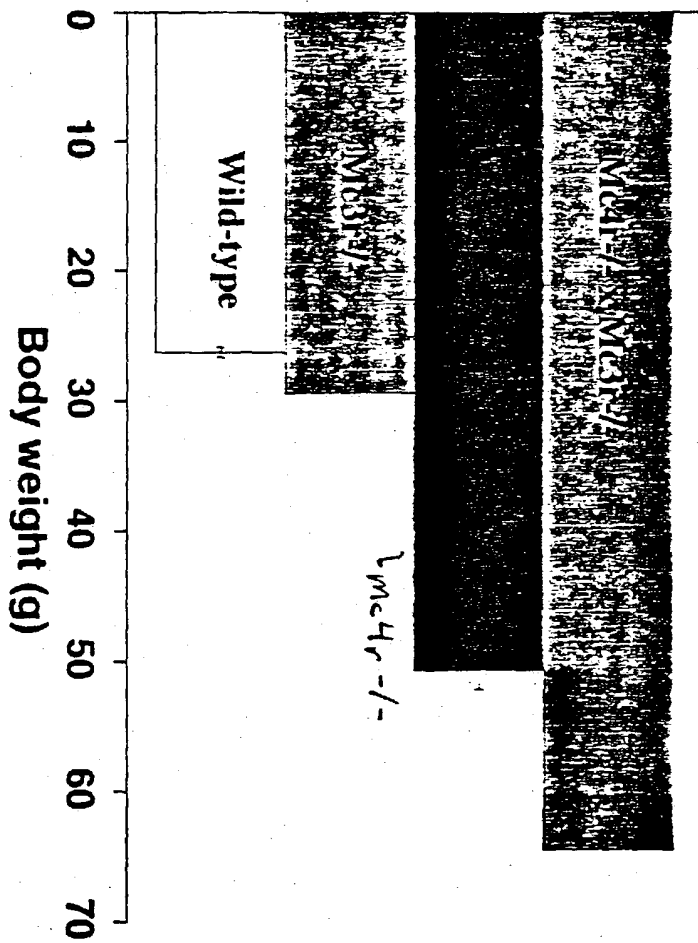
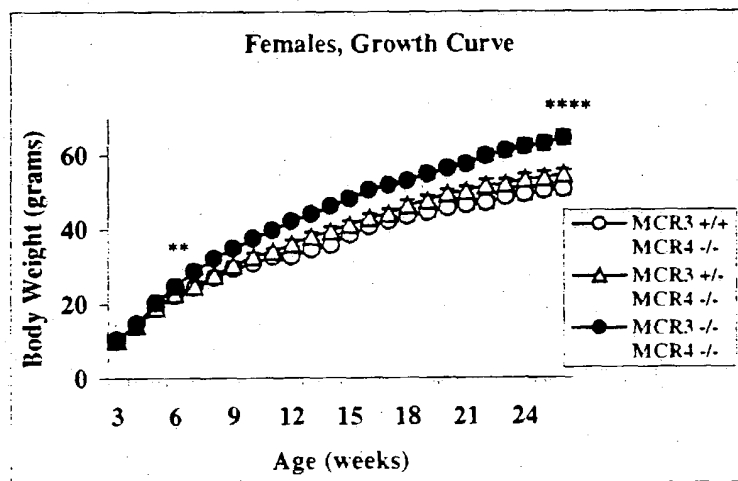


FIGURE 17

A



B

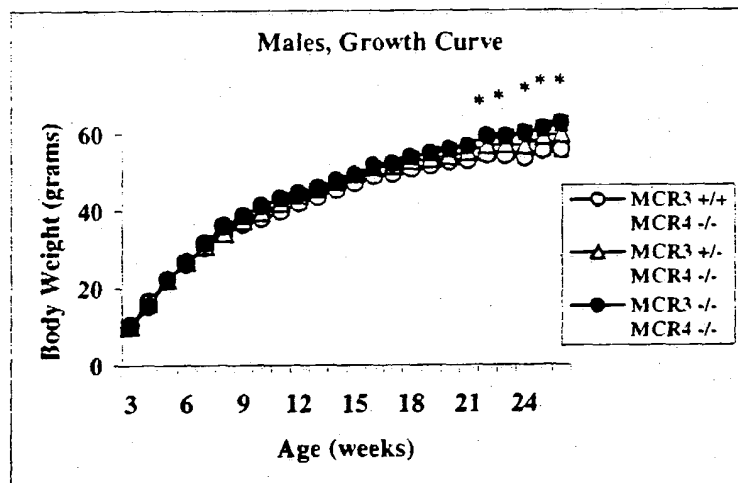
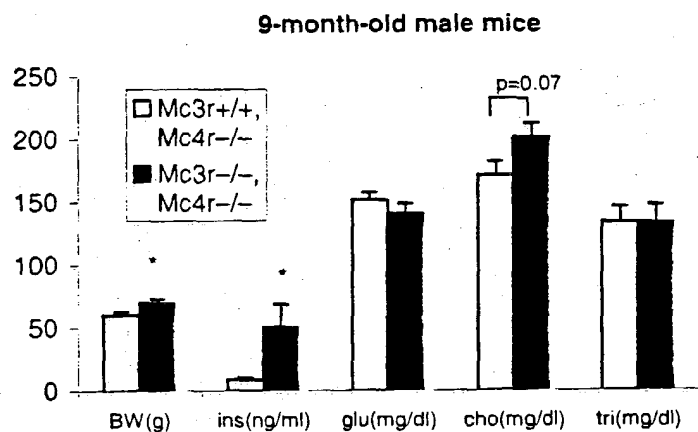
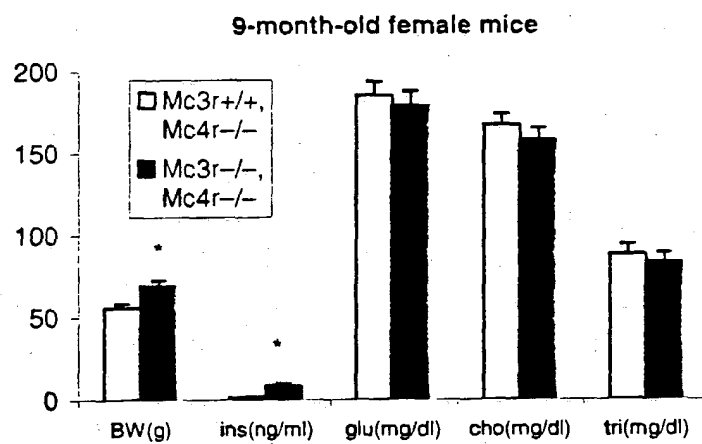
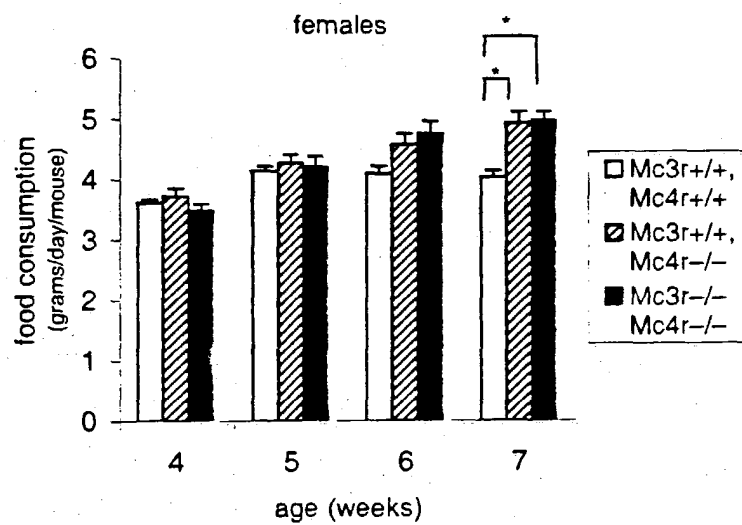
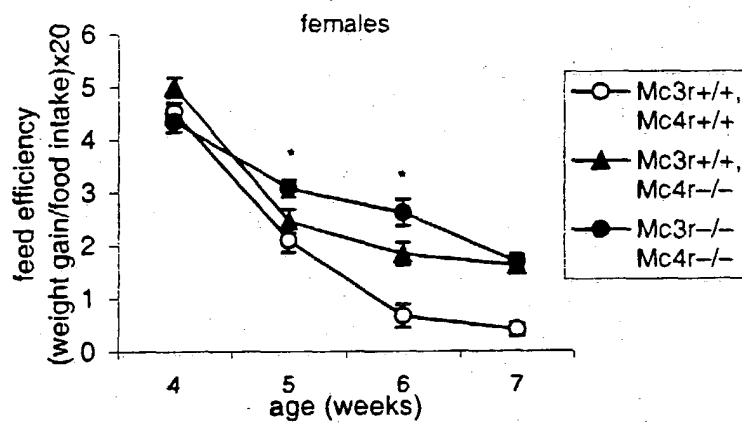


FIGURE 18A - B

A**B****FIGURE 19A - B**

A**B****FIGURE 20A - B**